

A NEW GENUS FOR THE AUSTRALIAN LUCERNE LEAF ROLLER
(LEPIDOPTERA: TORTRICIDAE).

By I. F. B. COMMON, Division of Entomology, C.S.I.R.O., Canberra, A.C.T.

(Five Text-figures.)

[Read 25th September, 1963.]

Synopsis.

The Lucerne Leaf Roller, generally known in the Australian economic literature as *Tortrix divulsana* (Walk.), is here referred to a new genus *Merophyas* in the tribe Archipini. The genus is described and the genitalia of both sexes of the type species are figured. Seven species are assigned to the genus and their synonymy is given.

INTRODUCTION.

A large number of Australian species of Archipini have been grouped in the genus *Tortrix* Linnaeus, principally by Meyrick (1910). Thirty-two species were recently referred by Common (1961) to *Epiphyas* Turner, but most of the remainder are not congeneric. The Lucerne Leaf Roller, *Conchylis divulsana* Walker, for example, and six other species form a natural group considered to be of generic significance. The group is clearly distinct from *Epiphyas* and, since the continued use of the combination *Tortrix divulsana* in economic papers is undesirable, a new genus *Merophyas* is here proposed for it. Mr. J. Dugdale (personal communication) states that the genus also occurs in New Zealand.

Genus MEROPHYAS,* gen. nov.

Type species, *Conchylis divulsana* Walker.

Antenna in male serrate and ciliated; labial palpus (Text-fig. 1) with second segment curved slightly upwards, somewhat expanded with scales above, apical segment smooth-scaled, short, obtuse. Thorax without posterior crest. Forewing (Text-fig. 2) smooth. R_1 from one-half cell, R_2 from three-quarters, R_1 to costa from upper angle, R_3 separate to termen, rarely stalked with R_1 , M_3 well separated at base from Cu_{1a} but both strongly curved and parallel, Cu_{1b} from three-fifths cell. Hindwing with R_s and M_1 short-stalked from upper angle of cell, M_2 approximated at base to M_3 , M_3 and Cu_{1a} approximated, connate or stalked, from lower angle, Cu_{1b} from three-quarters cell. Abdomen in male with mensis ventralis present on eighth sternum.

Male genitalia (Text-figs 3, 4).—Uncus spatulate; socii small; gnathos arms slender, united medially to form a flattened hook; valva broad near base, tapering distally, clothed with very long scales, apical portion membranous and usually differentiated into a small triangular lobe or cucullus, sacculus distinct, well sclerotized, slightly roughened; basal processes of valvae with strong spines, strongly arched and united in centre by membranous band; aedeagus pistol-shaped, with a series of small thorns on outer surface directed towards orifice, cornuti varying in number from one to many, deciduous, short, slender spines.

Female genitalia (Text-fig. 5).—Ostium very shallow or cup-shaped, sterigma sclerotized, broad, more or less rectangular; colliculum a large longitudinally-curved plate, ending obliquely near junction of ductus seminalis, ductus bursae without cestum; corpus bursae rounded, signum absent.

The genus *Merophyas* has certain characters in common with *Epiphyas* but is less specialized. As in *Epiphyas*, the male valva usually has a membranous terminal lobe, though it is small and poorly differentiated from the valvula. The transtilla is also replaced by spined basal processes of the valvae, and the mensis ventralis is present.

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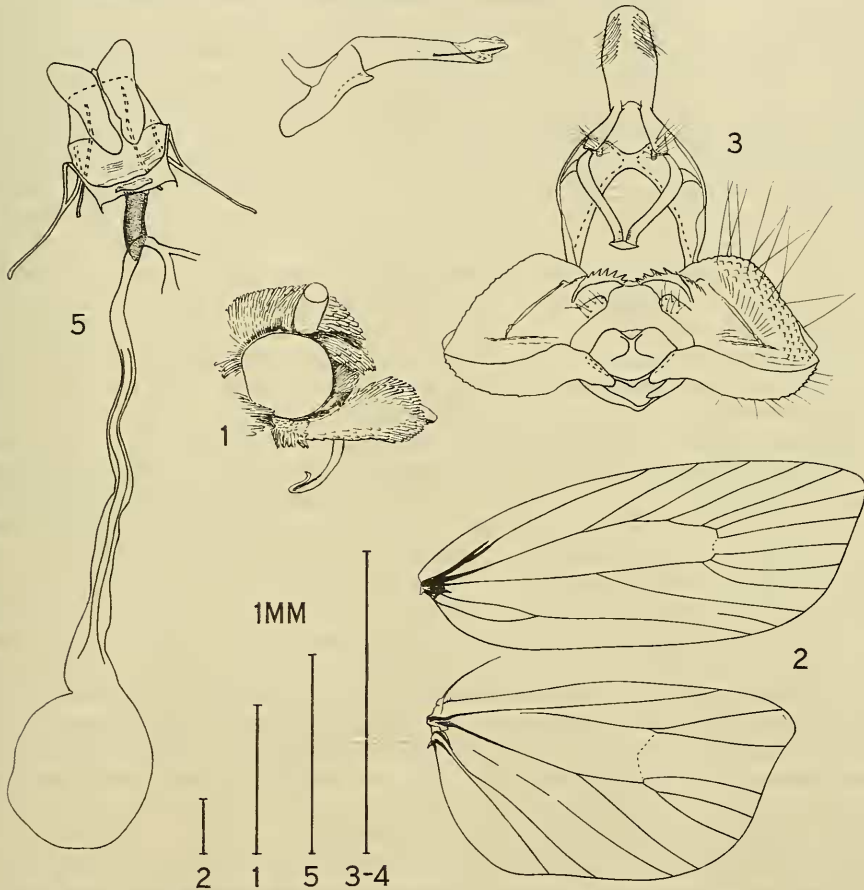
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The wing venation is very similar to that of *Epiphyas*. The stalking of R_1 and R_5 of the forewings in the male holotype of *Dichelia argillosana* Meyr. is interesting, for Meyrick's reliance on this venational character undoubtedly prevented his recognizing the generic position of this species. Its genitalia, however, are typical of *M. immersana* and its facies agrees well with that species.



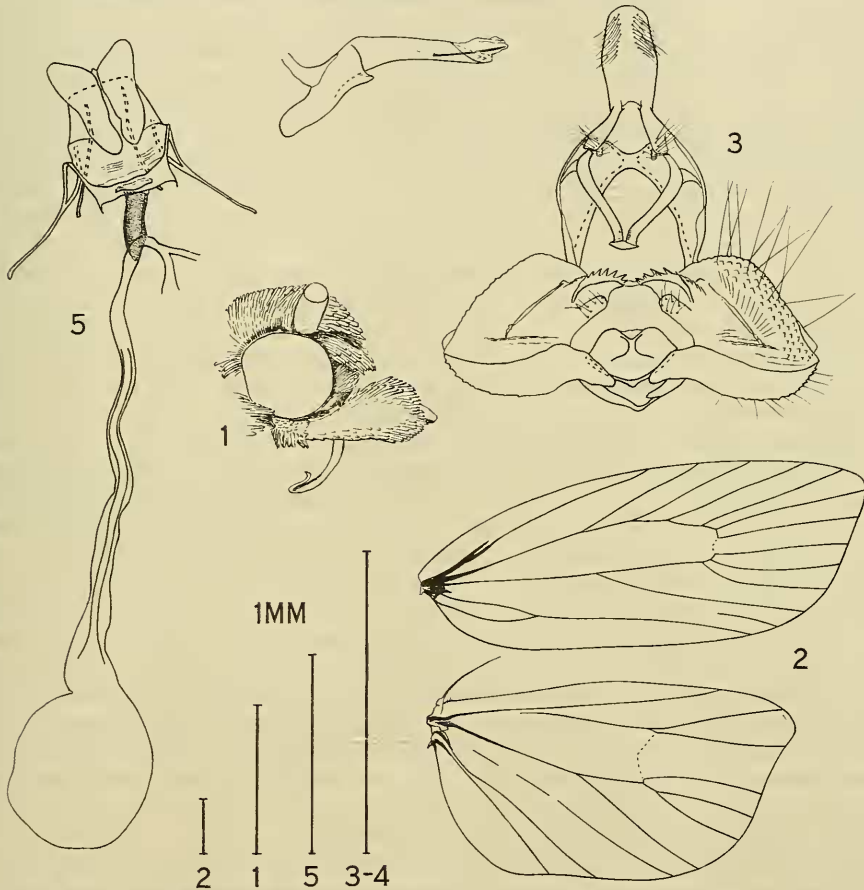
Text-figs 1-5.—*Merophyas divulsana* (Walk.): 1, head; 2, wing venation; 3, 4, ventral view of male genitalia and lateral view of aedeagus; 5, ventral view of female genitalia.

The species of *Merophyas* are yellowish in general colour, with variable markings, but often with the normal archipine pattern of basal patch, median transverse fascia and costal triangle, and with ochreous or fuscous hindwings. A costal fold is always absent in the forewing of the male and the signum is absent in the female corpus bursae. The adults occur amongst low-growing herbaceous plants and their larvae feed upon annual and perennial dicotyledonous herbs. *M. divulsana* is a widespread pest of lucerne in Australia, the larvae forming shelters by tying two or more adjacent leaves together. It is, however, polyphagous and the author has examined specimens reared from *Bassia quinquecupis*, *Senecio dryadeus*, *Taraxacum* (dandelion), lettuce, *Antirrhinum*, *Gypsophylla*, and garden mint.

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MEROPHYAS DIVULSANA (Walker). *Conchylis divulsana* Walk. 1863, *List Lep. Ins. Brit. Mus.*, 28: 364 (Moreton Bay, Q., holotype ♂ Brit. Mus. (without abdomen)). *Tortrix glaphyrana* Meyr., 1881, Proc. LINN. Soc. N.S.W., 6: 516 (Sydney, N.S.W., lectotype ♀ Brit. Mus., genitalia slide No. BM3372). *Tortrix cavillata* Meyr., 1922, *Exot. Microlep.*, 2: 497 (Melbourne, V., holotype ♂ Brit. Mus., genitalia slide No. JFGC9353). (New synonymy.) *Bactra australiana* Strand, 1924, *Iris*, 38: 147 (Boyanup, W.A., holotype ♂ Berlin Museum). (New synonymy.) *Tortrix encocochyta* Turn., 1945, *Trans. roy. Soc. S. Aust.*, 69: 65 (Scone, N.S.W., holotype ♂ Aust. Nat. Ins. Coll., C.S.I.R.O., genitalia slide No. T708). (New synonymy.) *Tortrix ischnosema* Turn., 1945, *Trans. roy. Soc. S. Aust.*, 69: 66 (Toowoomba, Q., holotype ♂ Aust. Nat. Ins. Coll., C.S.I.R.O., genitalia slide No. T707). (New synonymy.)

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